DAB System-on-Chip IC ATR2740

Atmel® provides a complete DAB solution including RF front end and DAB (Eureka 147) decoding baseband IC. The DAB baseband processor ATR2740 is a system-on-chip (SoC) solution with extended functionality. Its flexibility enables the implementation of additional application-related features facilitated by the software and hardware architecture of the ATR2740.

SoC Design Philosophy

The ATR2740 is a powerful, reliable, and simple solution for all DAB-related functions. Users do not need extensive DAB expertise, rather they only need to consider the application-specific aspects such as keypad, display, interface configuration, and external control.

Features and Benefits

- Full Functionality of all DAB Layer-1-related Tasks: all Modes, Protection Levels, and Profiles Conform to Eureka 147 and ETSI EN 300 401
- Easy External Control (Supported by Software and Hardware)
- FIC (Fast Information Channel) and MSC (Main Service Channel) Decoding
- Data Decoding of X-PAD and N-PAD Information
- Output of Receiver-related Parameters (e.g., BER Calculation, Synchronization Parameters, etc.)
- Decoding and Porting of Broadcast-related Information (e.g., Service Information, Labels, etc.)
- Status and Further Information about Receive Channel and Reception Condition
- Time and Frequency Synchronization
- Data Decoding in Parallel to Audio Decoding
- Optimized Weak-signal Support
- Dynamic Range Control
- DMB Support via Serial Synchronous and USB Interfaces
- Window Signal for Null Symbol and Synchronization Lock Indicator
- SPDIF and I²S Audio Interface with a Large Variety of Formats Supported
- Automotive Version Qualified to AEC-Q100
- BGA and LQFP Package

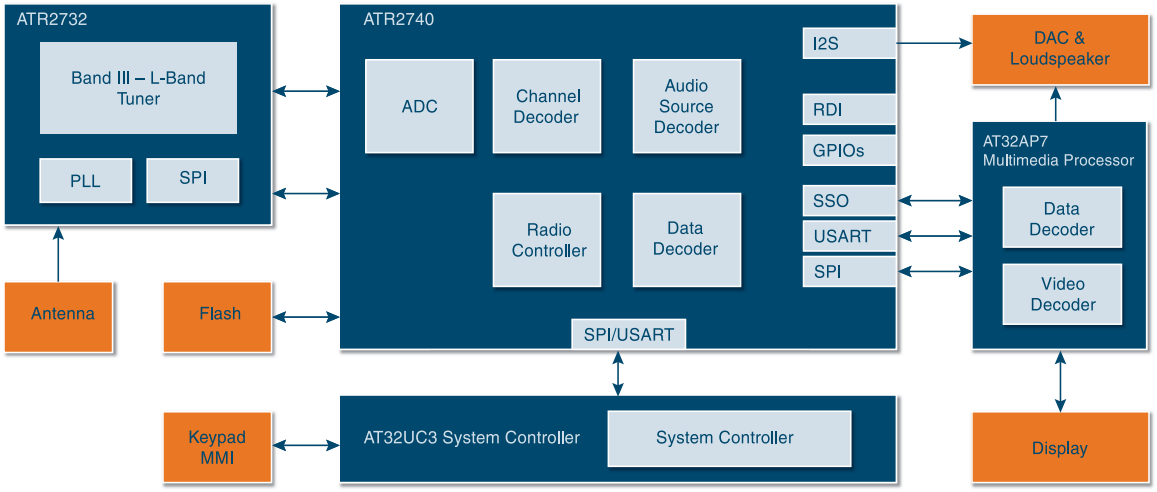
Support Tools

The support tools for the ATR2740 System-on-Chip IC include Atmel Digit Receiver API Software, which can be used to control the complete DAB system. The IC is also supported by a full suite of documents including datasheets and application notes. A DAB Evaluation Kit (ATR2732-40DEV-Kit1) is also available to support easy design-in of the DAB baseband processor ATR2740. This kit includes digital broadcast receivers, power supply, antennas, loudspeakers, and supporting software. While this kit has been designed for evaluation of audio, video, and data services, it can also be used for drive tests. For further information, please contact your local Atmel sales team or any Atmel distributor.

Performance

- All IF Inputs from 2 to 50 MHz Supported
- Perfect Combination with DAB Front End ATR2732
- Audio Decoding of Musicam and MPEG2 Layer 2 Supported for Bit Rates up to 1.8 Mbit/s. For further information, please refer to the ATR2740 Datasheet http://www.atmel.com/dyn/resources/prod_documents/4816s.pdf.

DAB System Overview



Atmel's Digital Audio Broadcasting (DAB) ICs

Part Number	Description	Package
ATR2730	L-band Down-converter Inclusive PLL for DAB Receivers	SSO28
ATR2731	DAB One-chip Front-end Receiver with High Integration Level	SSO44
ATR2732N1	Highly Integrated One-chip DAB/DMB Front-end IC, Dual Band Automotive Compliant Variant	QFN64
ATR2740M1-RQHH	DAB Digital Processing Device; Highly Integrated Digital Device for DAB Radios	LQFP128

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